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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,618	03/09/2004	Dennis S. Greywall	Greywall 33	1779
46850	7590	02/07/2006	EXAMINER	
MENDELSON & ASSOCIATES, P.C. 1500 JOHN F. KENNEDY BLVD., SUITE 405 PHILADELPHIA, PA 19102				STULTZ, JESSICA T
		ART UNIT		PAPER NUMBER
		2873		

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/796,618	GREYWALL, DENNIS S.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jessica T. Stultz	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 November 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 8-18 and 20-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 8-18, 20-26, 32 and 33 is/are allowed.
- 6) Claim(s) 27-31 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 November 2005 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

**DETAILED ACTION*****Examiner's Comments***

For applicant's information, the amended abstract filed November 18, 2005 overcomes the previous objection.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 27-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Howell et al US 6,983,924, herein referred to as Howell et al '924.

Regarding claim 27, Howell et al '924 discloses a MEMS device (Column 14, lines 57-65, wherein the springs are used in MEMS systems), comprising: an upright spring comprises two segments joined at one end of the spring and disjoint at another end of the spring (Column 5, lines 9-22 and Column 8, lines 31-39, wherein the upright springs "18" are joined at the intermediate platform and disjoint at the other end, Figure 6a), one disjoint segment end is coupled to the substrate and the other disjoint segment end is coupled to move with respect to the substrate (Column 5, lines 9-22 and Column 8, lines 31-39, wherein the platform "14" moves with respect to substrate "10", wherein the springs "18" are connected to the platform "14" and substrate "10" at the disjoint ends, Figure 6a); and the end of the spring having a joined segments is an unattached end

(Column 5, lines 9-22 and Column 8, lines 31-39, wherein the spring segments “18” are joined at an unattached end, specifically the intermediate platform, Figure 6a).

Regarding claim 28, Howell et al ‘924 further discloses that the spring is positioned with respect to the substrate such that the joined segment ends are at a greater distance from the substrate than the disjoint segment ends (Figure 6a, wherein the joined ends connected at the intermediate platform are at a greater distance from the substrate “10” than the disjoint segment ends connected to the substrate).

Regarding claim 29, Howell et al ‘924 further discloses that the spring is adapted to spread the segment ends via a scissor-type motion (Figure 6a and 7a-b).

Regarding claim 30, Howell et al ‘924 further discloses a rotatable mass suspended at a first offset distance from a substrate (Column 5, lines 9-22 and Column 8, lines 31-39 and Column 6, lines 50-65, wherein the platform “14” is offset from the substrate “10”, Figure 6a); wherein the disjoint segment end is connected to the mass (Column 5, lines 9-22 and Column 8, lines 31-39, wherein a disjoint ends of the spring segments “18” are connected to the platform “14”, Figure 6a), wherein the upright spring enables rotation of the mass about a rotation axis offset from the substrate by a distance greater than the first offset distance (Column 5, lines 9-22 and Column 8, lines 31-39, Column 6, lines 50-65, and Column 13, line 65-Column 14, line 4, wherein the platform rotates around a central axis offset from the substrate by distance greater than the first offset distance, Shown in Figures 7a-b, 9, 16a-b, and 17a-b).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al '924, as applied to claims 27-30 as shown above, in view of Costello et al '738.

Regarding claim 31, Howell et al '924 discloses a MEMS device as shown above, but does not specifically disclose a structure mounted on the rotatable mass and positioned at a second offset distance from the substrate greater than the first offset distance, wherein the upright spring extends beyond the rotatable mass. Costello et al '738 teaches of a MEMS device (Column 1, lines 22-25) wherein an upright spring extends from a substrate to a movable mass through an opening in the structure (Figures 1B-D) and beyond the mass (Column 3, lines 4-44, wherein the springs "158" extend between the substrate and the upper filter "152" which go beyond the mass "162" which is supported by springs "168", Figures 1C-D), wherein a structure is mounted on the mass at a distance greater than the distance between the substrate and the mass (Shown in Figures 1C-D, wherein the mass is "162" and the structure is "152") for the purpose of adjusting the filters to allow differing frequencies of wavelengths of light to pass through (Column 3, lines 4-44). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the MEMS device of Howell et al '924 to further include a structure mounted on the rotatable mass and positioned at a second offset distance from the substrate greater than the first offset distance, wherein the upright spring extends beyond the rotatable mass since Costello et al '738 teaches of a MEMS device wherein an upright spring extends from a substrate to a movable mass through an opening in the structure and beyond the mass, wherein a structure is mounted

on the mass at a distance greater than the distance between the substrate and the mass for the purpose of adjusting the filters to allow differing frequencies of wavelengths of light to pass through.

*Response to Arguments*

Applicant's arguments with respect to claims 27-31 have been considered but are moot in view of the new ground(s) of rejection in view of Howell et al '924 as shown above.

*Allowable Subject Matter*

Claims 8-18, 20-26, and 32-33 are allowed.

The following is an examiner's statement of reasons for allowable subject matter: none of the prior art alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Regarding independent claim 8, none of the prior art alone or in combination disclose or teach of a MEMS device as disclosed including a rotatable mass held above a substrate by upright springs at a first offset distance, specifically the device includes the rotatable mass being part of a motion actuator that in combination with the upright spring enables rotation of the rotatable mass about a rotation axis offset from the substrate by a distance greater than the first offset distance.

Regarding independent claim 32, none of the prior art alone or in combination disclose or teach of a MEMS device as disclosed including a rotatable mass held above a substrate by upright springs, specifically wherein the rotatable mass comprises an outer sub-structure adapted to move with respect to the substrate and an inner substructure adapted to move with respect to the outer sub-structure.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

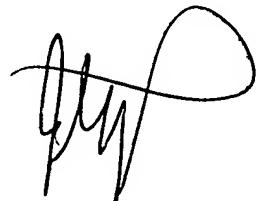
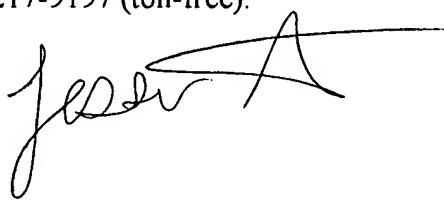
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T. Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jessica Stultz  
Patent Examiner  
AU 2873  
February 2, 2006



JORDAN SCHWARTZ  
PRIMARY EXAMINER